



A.D. 1869, 22nd FEBRUARY. N° 542.

SPECIFICATION

OF

JOHN OLIVER CHAPMAN PHILLIPS.

ARTIFICIAL TEETH.

LONDON:

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1869.



A.D. 1869, 22nd FEBRUARY. N° 542.

Artificial Teeth.

LETTERS PATENT to John Oliver Chapman Phillips, of Birmingham, in the County of Warwick, Dentist, for the Invention of “**AN IMPROVEMENT OR IMPROVEMENTS IN THE CONSTRUCTION OF SETS OR PARTIAL SETS OF ARTIFICIAL TEETH.**”

Sealed the 13th August 1869, and dated the 22nd February 1869.

PROVISIONAL SPECIFICATION left by the said John Oliver Chapman Phillips at the Office of the Commissioners of Patents, with his Petition, on the 22nd February 1869.

I, JOHN OLIVER CHAPMAN PHILLIPS, of Birmingham, in the County
5 of Warwick, Dentist, do hereby declare the nature of the said Invention for “**AN IMPROVEMENT OR IMPROVEMENTS IN THE CONSTRUCTION OF SETS OR PARTIAL SETS OF ARTIFICIAL TEETH,**” to be as follows:—

In the ordinary method of constructing sets or partial sets of artificial
teeth the said teeth are fixed rigidly in the vulcanite or other material
10 of which the artificial gums are composed. The teeth are incapable of the slightest yielding on mastication, and on the closing of the mouth

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the teeth of the lower jaw grate unpleasantly against the teeth of the upper jaw, unless the said teeth are fixed in the artificial gums with an accuracy very difficult of attainment.

The object of my Invention is to do away with the unpleasant grating referred to, and to give to the artificial teeth a power of slightly yielding 5 on the closing of the mouth and during mastication. This I effect by setting each tooth in an elastic socket, by means of which elastic sockets the teeth are connected to the artificial gums. I make the said elastic sockets in the following manner:—I take the teeth to be set and bend the pins at the back of the said teeth, and vulcanize a small piece of 10 hard india-rubber on the pins of each tooth separately. I model up in the usual manner, put the work embedded in plaster of Paris into a flask, and with hot water melt out the wax as usual; I then cover the exposed parts of the teeth and india-rubber with plaster of Paris or other substance that will bear the heat necessary for vulcanizing without injury. 15 I pack and bake the work in the ordinary manner, and when cold wash and pick out the teeth, the plaster of Paris allowing the teeth readily to leave the vulcanite. I rearrange the teeth in the base either before or after carving it, put them again into the flask, and with hot water melt out the wax. I then pack the teeth with flexible india-rubber of a 20 quality which will not harden on vulcanizing. I again heat the work so as to effect the vulcanizing of the flexible india-rubber, and finish off in the ordinary manner. In this way the teeth are fixed to the artificial gums of vulcanite by means of a layer or bed of flexible vulcanized india-rubber, in which flexible vulcanized india-rubber the teeth are fixed by 25 the pieces of hard india-rubber or vulcanite attached to their wires.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said John Oliver Chapman Phillips in the Great Seal Patent Office on the 16th August 1869.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, JOHN 30 OLIVER CHAPMAN PHILLIPS, of Birmingham, in the County of Warwick, Dentist, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-second day of February, in the year of our Lord One thousand eight hundred and sixty-nine, in the 35

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thirty-second year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said John Oliver Chapman Phillips, Her special licence that I, the said John Oliver Chapman Phillips, my executors, administrators, and assigns, or such others as I, the said
5 John Oliver Chapman Phillips, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an
10 Invention for "AN IMPROVEMENT OR IMPROVEMENTS IN THE CONSTRUCTION OF SETS OR PARTIAL SETS OF ARTIFICIAL TEETH," upon the condition (amongst others) that I, the said John Oliver Chapman Phillips, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the
15 nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said John Oliver Chapman Phillips,
20 do hereby declare the nature of the said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, that is to say:—

In the ordinary method of constructing sets or partial sets of artificial teeth the said teeth are fixed rigidly in the vulcanite or other material
25 of which the artificial gums are composed. The teeth are incapable of the slightest yielding on mastication, and on the closing of the mouth the teeth of the lower jaw grate unpleasantly against the teeth of the upper jaw, unless the said teeth are fixed in the artificial gums with an accuracy very difficult of attainment.

30 The object of my Invention is to do away with the unpleasant grating referred to, and to give to the artificial teeth a power of slightly yielding on the closing of the mouth and during mastication. This I effect by setting each tooth in an elastic socket, by means of which elastic sockets the teeth are connected either directly or indirectly to the
35 artificial gums. I make the said elastic sockets in the following manner:—I take the teeth to be set and bend the pins at the back of the said teeth and vulcanize a small piece of hard india-rubber on the pins of each tooth separately. I model up in the usual manner,

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put the work embedded in plaster of Paris into a flask, and with hot water melt out the wax as usual; I then cover the exposed parts of the teeth and vulcanite with plaster of Paris or other substance that will bear the heat necessary for vulcanizing without injury. I pack and bake the work in the ordinary manner, and when cold wash and 5 pick out the teeth, the plaster of Paris allowing the teeth readily to leave the vulcanite. I rearrange the teeth in the base either before or after carving it, put them again into the flask, and with hot water melt out the wax. I then pack the teeth with flexible india-rubber of a quality which will not harden on vulcanizing. I again heat the 10 work so as to effect the vulcanizing of the flexible india-rubber and finish off in the ordinary manner. In this way the teeth are fixed to the artificial gums of vulcanite by means of a layer or bed of flexible vulcanized india-rubber constituting an elastic socket in which flexible vulcanized india-rubber or elastic socket the teeth are fixed by the 15 pieces of hard india-rubber or vulcanite attached to their wires.

I will now proceed to describe, with reference to the accompanying Drawing, the manner in which I construct artificial teeth with elastic sockets according to my Invention.

Figure 1 represents in back elevation and plan an artificial tooth 20 having wires *a, a*, bent at their ends at right angles, and Figure 2 represents in side elevation the said tooth after the hard piece of vulcanite *b* has been attached to the tooth by the said wires *a, a*; Figure 3 represents in perspective, and Figure 4 in plan a set of artificial teeth for the lower jaw with elastic sockets according to my 25 Invention; Figure 5 is a vertical section of Figure 4 taken on the line *c*; Figures 3 and 4 being drawn of the natural size, and all the other Figures being drawn to a larger scale.

In Figures 3, 4, and 5 the hard vulcanite artificial gum is marked *d*, and the elastic socket or bed of flexible vulcanized india-rubber is 30 marked *e*; the hardened vulcanite attached to the tooth is marked *b*, and the wires by which the said vulcanite *b* is attached to the tooth are marked *a* in Figures 2 and 5. The corrugated figure of the hard vulcanite *b* attached to the tooth firmly secures the tooth in the elastic socket or bed *e*. The said elastic socket *e* may be constructed 35 as represented in Figures 3, 4, and 5, or each tooth may have a separate elastic socket, that is to say, instead of having a trough or continuous groove at *d*², *d*², in the artificial gum *d* in which the elastic socke

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or bed *e* of flexible india-rubber is inserted the said artificial gum may have a separate opening or socket for each tooth.

When I employ separate or detached elastic sockets for each tooth I prefer to carry my Invention into effect in the manner illustrated 5 in Figures 6, 7, and 8 of the Drawing, that is to say, I insert the tooth *f* in a porcelain or vulcanite cell *g* or cell of other hard material, the elastic socket *h* of soft flexible india-rubber being situated between the neck of the tooth and the cell *g*. Figure 6 represents the tooth in perspective, and Figure 7 represents the cell *g* in perspective; Figure 8 10 represents the cell *g* and the elastic socket *h* in section and the tooth *f* in elevation. By an examination of the tooth *f*, Figures 6 and 8, it will be seen that a series of corrugations or flutings is made in the neck of the tooth, and it will be seen by reference to Figure 8 that a series of corrugations or flutings is made on the inner surface of the 15 cell *g*. By means of these corrugations the elastic socket *h* of flexible india-rubber is firmly secured in the cell *g*, and the tooth *f* is firmly secured in the elastic socket *h*. Separate artificial teeth mounted in elastic sockets and cells, as represented in Figure 8, may be manufactured on a large scale and supplied to dentists to be set in artificial gums, thereby 20 saving to the dentist the trouble of making the said elastic sockets for himself, as in the form of my Invention described with reference to Figures 1, 2, 3, 4, and 5.

The same method of fixing the teeth in the elastic socket of the separate cells represented in Figures 6, 7, and 8 may be applied to 25 the fixing of the teeth in the continuous elastic socket or bed of the set of teeth, Figures 3, 4, and 5, that is to say, instead of attaching a hard piece of vulcanite *b* by which to connect the tooth to the elastic socket *e* the wires *a*, *a*, and the said hard piece of vulcanite *b* may be dispensed with, and the necks of the teeth be prolonged and corrugated, 30 as in Figures 6 and 8, the said teeth being secured in the continuous elastic socket or bed by the said corrugations, but I do not limit myself to any particular method of fixing the teeth in the elastic sockets or bed of flexible vulcanized india-rubber.

The elastic sockets made according to my Invention may be confined 35 to the double teeth of the set or to the single as well as the double teeth of the set.

Having now described the nature of my Invention, and the manner in which the same is to be performed, I wish it to be understood that I do

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not limit myself to the precise details herein described and illustrated, as the same may be varied without departing from the nature of my Invention ; but I claim as my Invention, the improvement or improvements in the construction of sets or partial sets of artificial teeth herein-before described and illustrated in the accompanying Drawing, that is to say, setting artificial teeth in elastic beds or sockets, the said beds or sockets being either placed in the artificial gums in which the teeth are fixed or placed in separate cells inserted and fixed in the artificial gums, substantially as and for the purposes herein-before described and illustrated. 10

In witness whereof, I, the said John Oliver Chapman Phillips, have hereunto set my hand and seal, this Fourteenth day of August, in the year of our Lord One thousand eight hundred and sixty-nine.

JOHN OLIVER CHAPMAN PHILLIPS. (L.S.) 15

Witness,

RICHARD SKERRETT,

Clerk to George Shaw,
Birmingham.

LONDON :

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Printers to the Queen's most Excellent Majesty. 1869.

A.D. 1869, FEB. 22. N^o 542.
 PHILLIPS' SPECIFICATION.

FIG. 1.

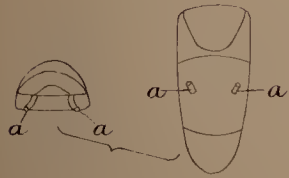


FIG. 2.

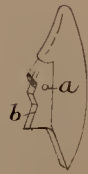


FIG. 3.

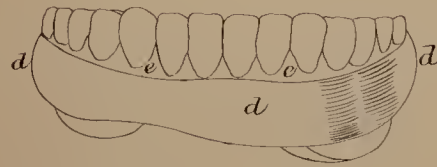


FIG. 5.

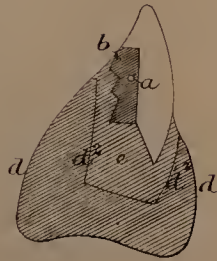


FIG. 4.

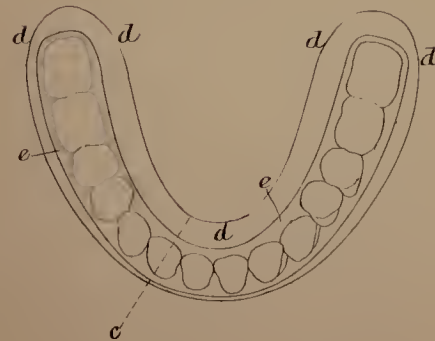


FIG. 6.

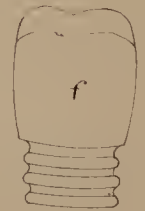
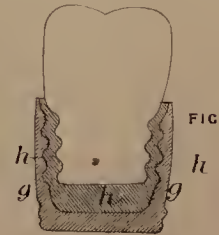


FIG. 7.



FIG. 8.



The filed drawing is partly colored.

Drawn on Stone by Malby & Sons

